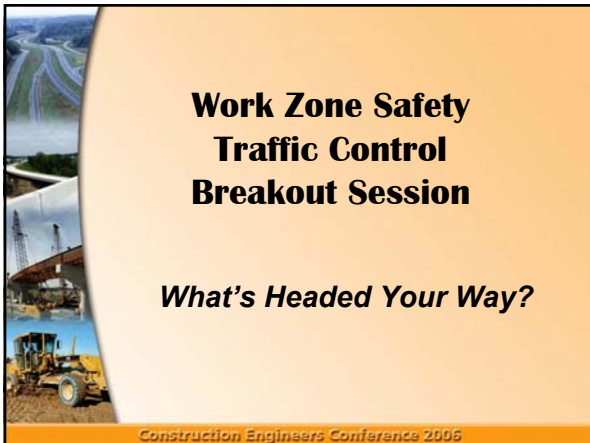


Work Zone Safety/Traffic Control







Work Zone Safety/Traffic Control



Our Session Today

- **Presenters**
 - *J. Stuart Bourne, PE*
State Work Zone Traffic Engineer
 - *Meredith McDiarmid, PE*
WZTC Unit Project Engineer
 - *Michelle Long, PE*
Construction Programs Engineer
 - *Tammy Stewart*
Public Information Officer
 - *Amanda Perry*
Work Zone Safety Specialist


Construction Engineers Conference 2006



Our Session Today

- **Facilitator**
 - *Jimmy L. Travis, PE,*
State Construction Operations Engineer

Construction Engineers Conference 2006



Federal Highway Administration, USDOT

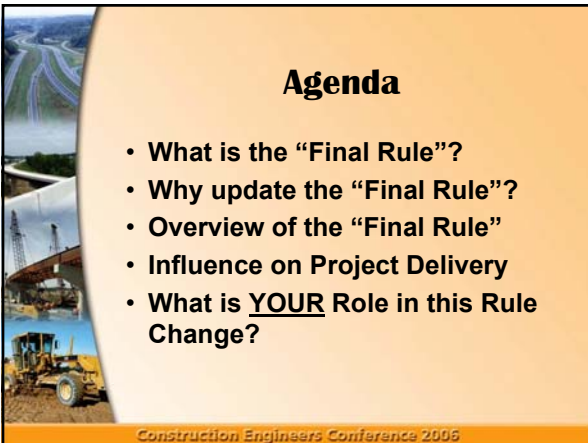
The Final Rule on Work Zone Safety and Mobility

Updates to 23 CFR Section 630, Subpart J

Construction Engineers Conference 2006


Work Zone Safety/Traffic Control








Work Zone Safety/Traffic Control



“FINAL RULE”

- What is the “final rule”**23 CFR 630 Subpart J**
- Everything the Federal Government funds and oversees has rules and regulations and these are documented in the Code of Federal Regulations manual (CFR)
- Obviously, highways are an integral part of the operation of our transportation infrastructure and thus have Federal moneys allocated for highway construction

Construction Engineers Conference 2006




“FINAL RULE”

- The Code of Federal Regulations is divided into 50 areas or “Titles”

Below are some examples

- Title 3 - The President
- Title 12- Banking
- **Title 23- Highways**
- Title 34- Education
- Title 49- Transportation

Construction Engineers Conference 2006




“FINAL RULE”

- **Title 23- Highways**- Has 3 Chapters
- Chapter 1- Federal Highway Administration, Department of Transportation
- Chapter 2- National Highway Traffic Safety Administration and Federal Highway Admin
- Chapter 3- National Highway Traffic Safety, DOT

Construction Engineers Conference 2006

Work Zone Safety/Traffic Control




- **Title 23- Highways: Chapter 1- Federal Highway Administration** is our focus
- Chapter 1 has 11 “Subchapters” labelled A thru K
 - SubChapter G - is the location for “Engineering and Traffic Operations “
 - Part 630 is the location for “PreConstruction Procedures”
 - SubPart J is the location for “Traffic Safety in Highway and Street Workzones”
- Hence, the reference [23 CFR Part 630, Subpart J](#)

Construction Engineers Conference 2006



Why Update the Final Rule?

Construction Engineers Conference 2006




Why Update the WZ Rule

- Legislative requirement
 - Congress required the FHWA to review current work zone problems and update the regulation to:

“Better reflect current needs for improved safety and to minimize disruptions to traffic during the construction of highway projects”
- So, we were told to update the regulation, but
- We also believe that it makes good sense to update it

Construction Engineers Conference 2006


Work Zone Safety/Traffic Control



Influencing Factors:

- Growing traffic volumes and congestion
 - Vehicle travel up, but very little growth in road miles
- Our highways are approaching middle age
 - More construction and repair is needed, which means more work zones
- More work is done under traffic
 - Compressed contractor schedules
 - Increasing night work
- Work zone safety continues to be a concern
 - Over 41,000 injuries and 1028 fatalities in 2003
- Travelers are not happy with work zones
 - Unexpected road conditions and inconsistency cause traveler frustration

Construction Engineers Conference 2006



Fatal Crashes in North Carolina Work Zones

- 2000 - 29 Fatal Crashes - 2.0% of all Fatal Crashes
- 2001 - 33 Fatal Crashes - 2.3% of all Fatal Crashes
- 2002 - 35 Fatal Crashes - 2.4% of all Fatal Crashes
- 2003 - 33 Fatal Crashes - 2.3% of all Fatal Crashes
- 2004 - 43 Fatal Crashes - 3.1% of all Fatal Crashes

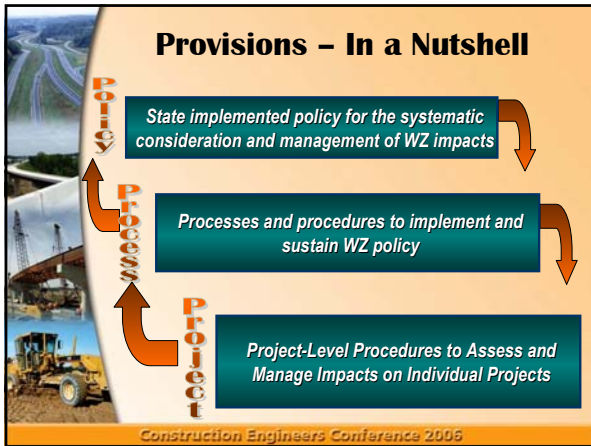
Construction Engineers Conference 2006



Overview of Final Rule

Construction Engineers Conference 2006

Work Zone Safety/Traffic Control



Overview of the Final Rule

Goals:

- Expand thinking beyond the actual "Project" itself
 - Focus efforts to address Corridor, Network, and Regional issues while planning and designing road projects
- Expand WZ management beyond "traffic safety and control"
 - Address mobility in addition to safety
 - Facilitate [customer-focused project development](#) through comprehensive consideration of work zone impacts
 - Address current day issues with ["operations and management"](#) and ["public information"](#)
- Advocate innovative thinking in "Project" Planning, Design, and Management so as to consider alternative/innovative design, construction, contracting and traffic management strategies

Construction Engineers Conference 2006

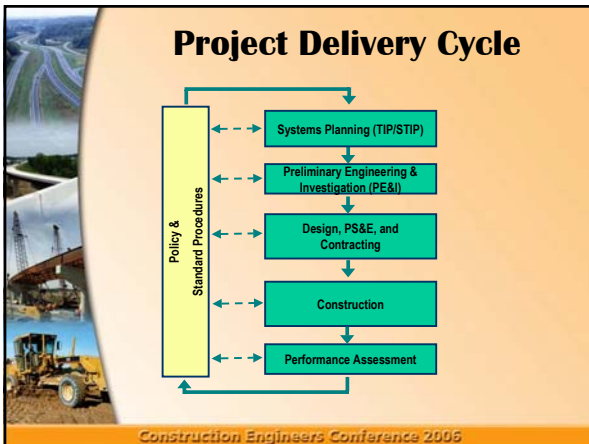
Overview of Final Rule

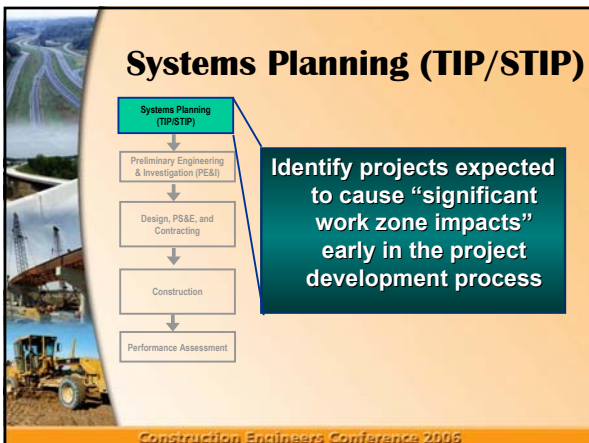
- Published September 9, 2004
- All States to be in full compliance by October 12, 2007
- North Carolina is recognized as a "lead state" and has volunteered to be an early implementer
- North Carolina is shooting for full implementation by October 2006

Construction Engineers Conference 2006

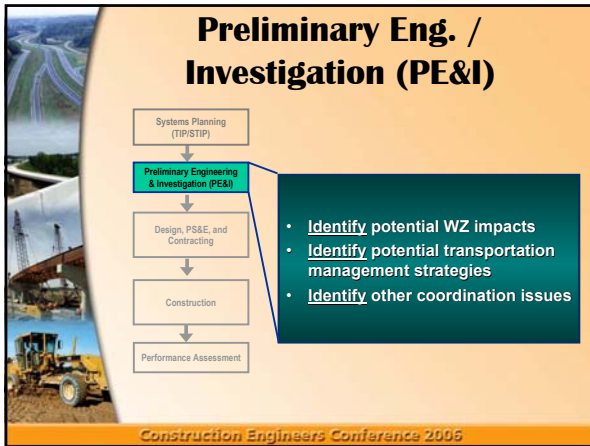
Work Zone Safety/Traffic Control

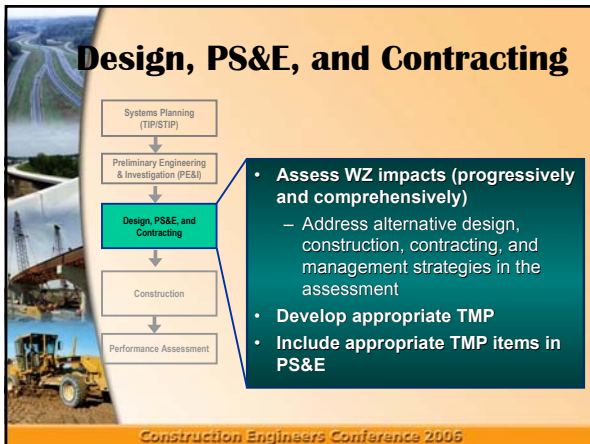


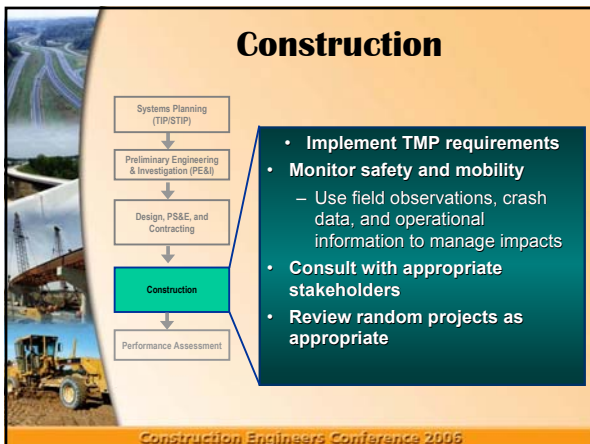




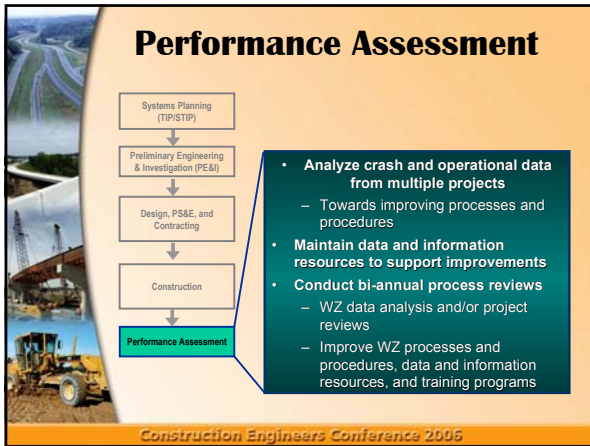
Work Zone Safety/Traffic Control

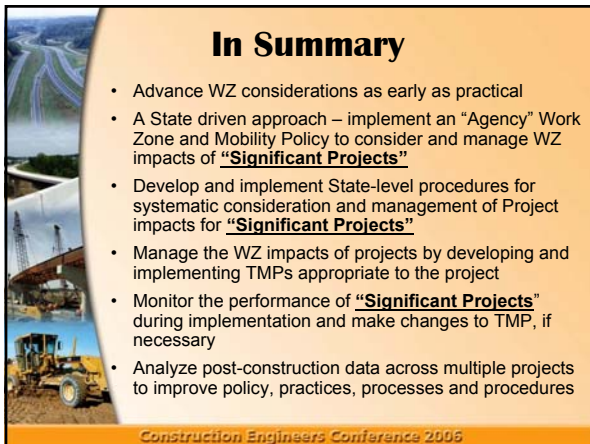


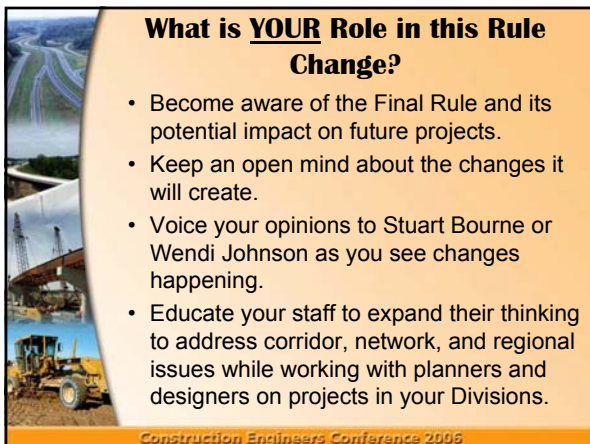




Work Zone Safety/Traffic Control







Work Zone Safety/Traffic Control






Project Issues

- Pavement Drop-Offs
- Signing Issues
- Ingress/Egress
- Monitoring Traffic Back-ups
- New Safety Vest

Construction Engineers Conference 2006



Pavement Drop-Offs

Drop-off between lanes of traffic

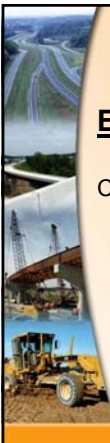
Close adjacent traffic lane if:

- Drop-off is over 2" no matter what the speed limit is
- Use "UNEVEN LANES" signs

Construction Engineers Conference 2006

Work Zone Safety/Traffic Control





Pavement Drop-Offs

Edge of Pavement Drop-Off

Close adjacent traffic lane or use 6:1 slope if:

- Drop off is over 2" and speed limit is equal or greater than 45 mph
- Drop off is over 3" and speed limit is less than 45 mph
- Use " LOW/SOFT SHOULDER" signs

Construction Engineers Conference 2006



Construction Engineers Conference 2006

Work Zone Safety/Traffic Control

Signing Issues

- Remove signing when not in use
- Maintain credibility of signs
- Signing issues at "T" intersections
- Maintenance of signs
- Using proper signs

Construction Engineers Conference 2006

Ingress/Egress

- Use end of lane closures to enter and exit the project
- Internal Traffic Control Plan for contractors

Construction Engineers Conference 2006

Internal Traffic Control Plan

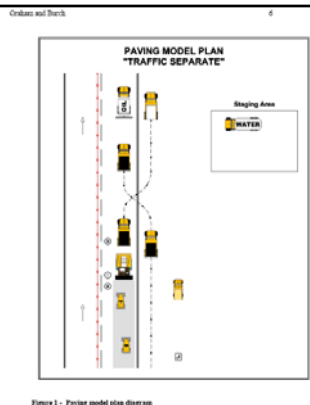
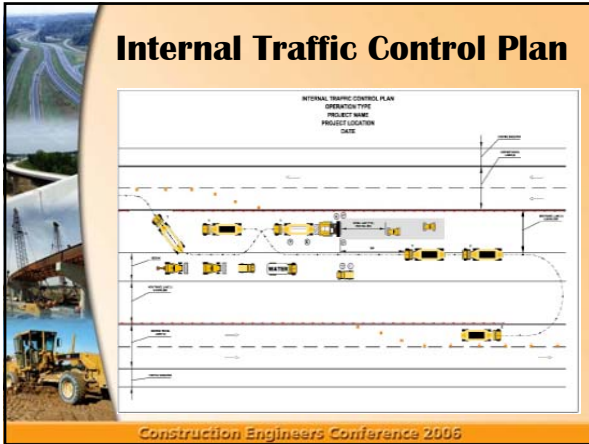


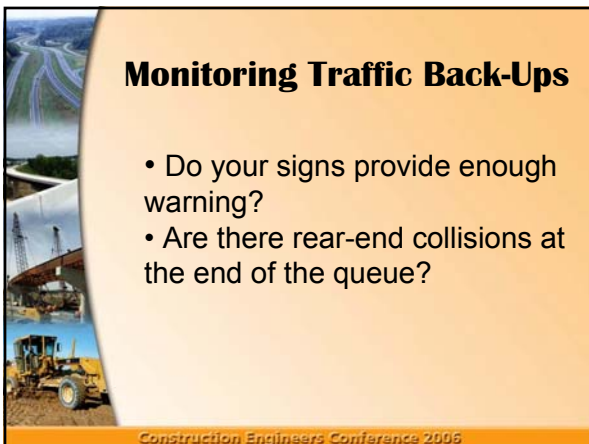
Figure 1 - Paving model plan diagram

Construction Engineers Conference 2006

Work Zone Safety/Traffic Control








Work Zone Safety/Traffic Control







Work Zone Safety/Traffic Control



Work Zone Safety Program

- **Work Zone Safety Awareness Month**
 - April
 - Kickoff Event
 - * Greensboro Urban Loop
 - * Debut Trucking Video
 - Work Zone Safety Calendar Event
 - Proposed “Operation Drive Smart”
 - Distribution of Ribbons, Statistics and Driving Tip Cards to NCDOT Employees and Contractor Personnel


Construction Engineers Conference 2006



Work Zone Safety Program

- **Trucking Video**
 - Work Zone Safety Education Video
 - Targets Professional Trucking Industry
 - Partnership With CAGC
 - Worked Closely With NCTA
 - Debuts in April

Construction Engineers Conference 2006



Work Zone Safety Program



Construction Engineers Conference 2006

Work Zone Safety/Traffic Control

Work Zone Safety Program

- '06-07 Work Zone Safety Calendar

- Biannual Poster Contest
- Targets Future Motorists
- Partnership With CAGC
- More Than 1,000 Entries
- 12 Winning Posters on WZS Calendar
- Debuts in April at South Smithfield Elementary School
- Significant Media Interest

Construction Engineers Conference 2006

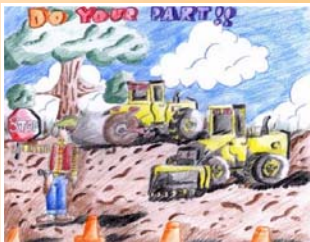
Work Zone Safety Program



*Dominick Wilson
Greenville, N.C.
Ages 5-8*

Construction Engineers Conference 2006


Work Zone Safety Program



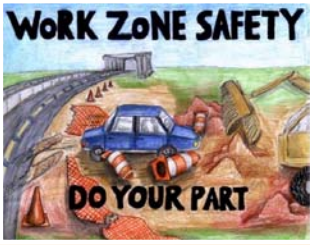
*Nathan Kipp
Concord, N.C.
Ages 9-11*

Construction Engineers Conference 2006

Work Zone Safety/Traffic Control




Work Zone Safety Program




*Elizabeth Fox
Burlington, N.C.
Ages 12-15*

Construction Engineers Conference 2006




Work Zone Safety Program




*Berkley Webster
Burlington, N.C.
Ages 16-18*

Construction Engineers Conference 2006




Work Zone Safety Enforcement Efforts

- NCSHP Project Patrols
 - Request for Your Projects
 - Proper Signing for Enforcement
 - Special Initiatives



Construction Engineers Conference 2006


Work Zone Safety/Traffic Control



Work Zone Safety Enforcement Efforts

- How Do I Get the NCSHP to Patrol My Projects?
 - Division Construction Engineer
 - Ms. Sherell Williams
Construction Projects & Information Engineer, Construction Unit
(919)733-2210


Construction Engineers Conference 2006



Work Zone Safety Enforcement Efforts


- Proper Signing for Enforcement
 - General Statute Requirements

Construction Engineers Conference 2006



Work Zone Safety Enforcement Efforts

- Special Initiatives
 - Drone Radar Cars
 - Operation Yellow Jacket
 - Adjudication Outreach Efforts



Construction Engineers Conference 2006

- **Drone Radar Cars**
 - *Unmanned Vehicles Identical to Operational NCSHP Vehicles*
 - *Operation Light Bar and K-band Power*
 - *Solar Powered*
 - *Consistent 3-5 MPH Reduction in the 85th Percentile Vehicle Speeds*


[illegible]

Why?

- Inform NCDOT Employees
- Inform Our Partners
- Share Facts
- Promote “Safety Stand Downs”
- Prevent Future Occurrences

2006 Construction Engineers Conference

Work Zone Safety/Traffic Control



NCDOT Safety Alert

How?

- React Quickly
- Use Current Contacts to Disseminate Electronically
- PDF & Word Versions
- Included in the E-mail Text

Construction Engineers Conference 2006



IMPACT Program Update

- Media Training for the Field Engineers
- Media Calls



Construction Engineers Conference 2006



Media Training for the Field

- Tips on How to Handle Different Types of Media (TV, Print, Radio)
- On-camera Interview Tips
- Good Interview vs. Bad Interview
- Dos and Don'ts When Dealing With Reporters From Any Media Outlet

Construction Engineers Conference 2006

Work Zone Safety/Traffic Control



Media Calls

- Keep Us “In the Loop”
- Call if You Need Assistance



Construction Engineers Conference 2006




Work Zone Certification

Work Zone Certification Committee

- WZTCU
- Maintenance
- Construction
- AGC
- Utilities
- DOC



Construction Engineers Conference 2006



Work Zone Safety Traffic Control Breakout Session

Questions?

Construction Engineers Conference 2006
